

## Revision of the Genus *Pandanus* Stickman. Part 36 The New Section *Asperi* from Indomalaya<sup>1</sup>

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THE GREAT MAJORITY of the species of *Pandanus* have the free apex or pileus of the carpels smooth and shining. A few others, occurring in Indomalaya, have the pileus rough, due to being completely covered by hard, flat, radiating scales. These species are now placed in the new section here described, section *Asperi*.

### Section *Asperi* sect. nov. (subgen. *Lophostigma*)

Dupae 1-loculatae prismaticae sunt, stylo subulato, stigmatē distali lineari fere stylo aequanti, pileo aspero cum squamis rigidis salientibus multis, syncarpiis solitariis vel spicatis ellipsoideis, arboribus fruticibus vel enim acaulescentibus. Planta mascula cum spicis compluribus, staminibus solitariis.

Drupes 1-celled, prismatic; style subulate; stigma distal, linear, almost as long as the style; pileus scabrous by very many salient rigid scales; syncarps solitary or spicate, ellipsoid; trees, shrubs, or even acaulescent. Male plants with several spikes, the stamens single, attached directly to the rhachis.

HOLOTYPE: *Pandanus atrocarpus* Griffith, Notulae ad Plantas Asiaticas 3: 160–161, 1851.

Other species assigned to this new section are: *P. Alkemadei* Martelli, of Sumatra; *P. Kurzii* Merrill, of Java; and *P. obovoideus* Merrill, and *P. Gibbsianus* Martelli, of Borneo; and the author has several others in manuscript.

The new name is the nominative plural of the Latin adjective *asper*, “rough,” which word aptly describes the surface of the pileus.

*Pandanus asper* sp. nov. (sect. *Asperi*)

Fig. 327

NOM. VERN.: “pandan sēpēdjam” (on Sumatra).

DIAGNOSIS HOLOTYPE: Frutex est, foliis 1.59–1.62 (+0.1–0.15?) m longis proxima basem 2.8–3 cm latis in medio 2.9–3 cm latis subtiliter coriaceis supra viridibus lucidis infra pallide viridibus late U-sulcatis 2-plicatis in sectione mediali cum 32 nervis parallelis secundariis in dimidio quoque nervis tertiis transversis paullo evidentis et reticulis quadratis vel breve oblongis formantibus lamina ligulata abrupte in apice trigono breve crasse subulato deminuenti eo in puncto 10 cm ex apice 22 mm lato (basi non conservata), proxima basem marginibus cum aculeis 1.7–2 mm longis 10–18 mm separatis arcuatis crasse subulatis adscendentibus compressis stramineis sed latere infero concavo, proxima basem midnervo infra cum aculeis 3 mm longis paucis remotis subulatis recurvatis, in sectione mediali marginibus cum aculeis 0.6–0.8 mm longis 7–17 mm separatis subulatis compressis adscendentibus stramineis, midnervo vicinali infra inermi, ad apicem marginibus cum aculeis 0.2 (–0.3) mm longis 0.5–2 mm separatis subulatis compressis stramineis adscendentibus sed paullo retro-curvatis, ad apicem midnervo infra cum aculeis 0.3–0.4 mm longis 1–5 mm separatis simulantibus, ad apicem plicis supra cum aculeis 0.3–0.6 mm longis 1.5–5 mm separatis arcuatis conici-subulatis adscendentibus, infructescentia

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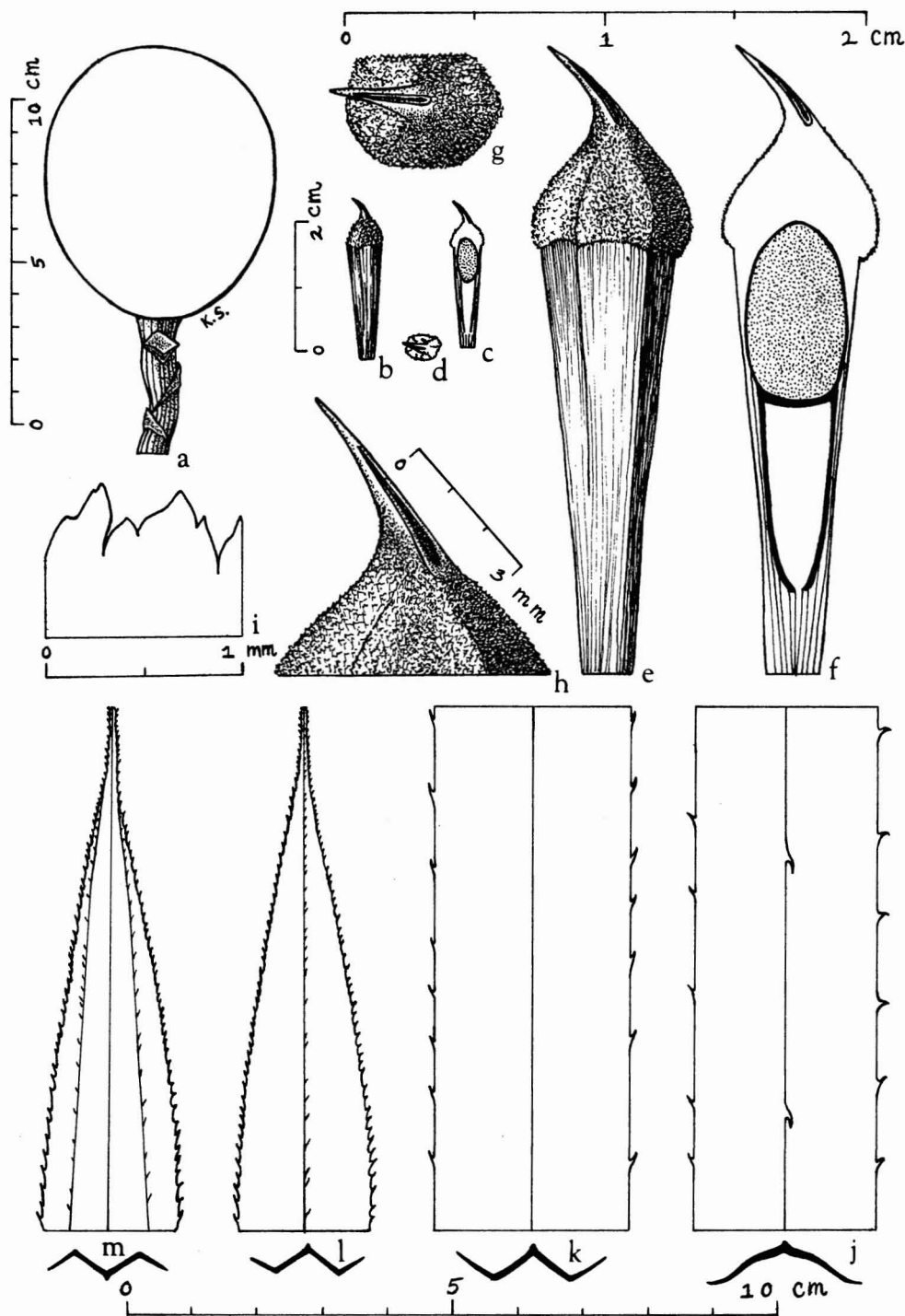


FIG. 327. *Pandanus asper* St. John, from holotype. a, syncarp,  $\times \frac{1}{2}$ ; b, drupe, lateral view,  $\times 1$ ; c, drupe, longitudinal median section,  $\times 1$ ; d, drupe, apical view,  $\times 1$ ; e, drupe, lateral view,  $\times 4$ ; f, drupe, longitudinal median section,  $\times 4$ ; g, drupe, apical view,  $\times 4$ ; h, pileus, style, and stigma,  $\times 10$ ; i, pileus scale, lateral view,  $\times 30$ ; j, leaf base, lower side,  $\times 1$ ; k, leaf middle, lower side,  $\times 1$ ; l, leaf apex, lower side,  $\times 1$ ; m, leaf apex, upper side,  $\times 1$ .

licet erecta et cum syncarpio solitario, pedunculo ultra 12 cm longo 10 mm diametro trilaterato cum bracteis compluribus caducis, syncarpio 7.3–8.5 cm longo 6.3–6.5 cm diametro late obovoideo trilaterato (licet ferrugini-badio), drupis 23–27 mm longis 4–6 mm latis et crassis anguste oblanceoloideis 4–7-angulosis parte  $\frac{1}{4}$  supera libera, pileo 4–6 mm alto pyramidal-hemisphaerico 4–7-anguloso et cum squamis 1.5 mm longis brunneis planis salientibus in apice acute lobatis obtectis, stylo 3–4 mm longo crasse subulato minime sursum curvato, stigmate 2.5–3.5 mm longo badio papilloso fere ad apicem extenso, endocarpio in parte  $\frac{1}{3}$  infera et 8–9 mm longo oblanceoloideo apice concavo lateribus 0.1 mm crassis cartilagineis intra badiis lucidis, semine 2.5–3 mm diametro, mesocarpio apicali 5–6 mm longo ellipsoideo parenchymatoso, mesocarpio basali 2.5–3 mm longo fibroso et carnoso.

DIAGNOSIS OF HOLOTYPE: Shrub; leaves 1.59–1.62 (+0.1–0.15?) m long, 2.8–3 cm wide near the base, 2.9–3 cm wide at the middle, thin coriaceous, above green and shiny, below pale green, broadly U-sulcate, 2-pleated, at midsection with 32 parallel secondary veins in each half, the tertiary cross veins faintly visible, forming square or short oblong meshes, the blade ligulate, shortly narrowing into a short trigonous thick subulate apex, this at the point 10 cm down 22 mm wide (the base not preserved); near the base the margins with prickles 1.7–2 mm long, 10–18 mm apart, arcuate thick subulate, ascending but reverse curved, compressed, stramineous; near the base the midrib below with prickles 3 mm long, subulate, recurved, remote; at midsection the margins with prickles 0.6–0.8 mm long, 7–17 mm apart, subulate, compressed, ascending, stramineous; the nearby midrib below unarmed; near the apex the margins with prickles 0.2 (–0.3) mm long, 0.5–2 mm apart, subulate, compressed, slightly reverse curved, ascending, stramineous; near the apex the midrib below with similar prickles 0.3–0.4 mm long, 1–5 mm apart; near the apex the pleats with prickles 0.3–0.6 mm long, 1.5–5 mm apart, arcuate conic sub-

ulate, ascending; infructescence probably erect, bearing a solitary syncarp; peduncle more than 12 cm long, 10 mm in diameter, 3-sided, bearing several caducous bracts; syncarp 7.3–8.5 cm long, 6.3–6.5 cm in diameter, broadly obovoid, 3-sided (apparently rusty brown in color); drupes 23–27 mm long, 4–6 mm wide and thick, narrowly oblanceoloid, 4–7-angled, the upper  $\frac{1}{4}$  free; pileus 4–6 mm high, pyramidal-hemispheric, 4–7-angled, covered with a multitude of brown salient flat scales about 1.5 mm long, the apex with several acute lobes; style 3–4 mm long, thick subulate, slightly upcurved; stigma 2.5–3.5 mm long, brown, papillose, reaching almost to the tip; endocarp in the lower  $\frac{1}{3}$  and 8–9 mm long, oblanceoloid, the apex concave, the walls 0.1 mm thick, cartilaginous, within brown, shining; seed 2.5–3 mm in diameter; apical mesocarp 5–6 mm long, ellipsoid, filled with parenchyma; basal mesocarp 2.5–3 mm long, fibrous and fleshy.

HOLOTYPE: Indonesia, Sumatra, Res. Palembang, Afd. Rawas, Bosch, 150 m. zeehoogte, heester, Vrucht Bolvormig van vriesgrote, krachtig gestekeld, 1920, *W. Grasshoff* 1,095 (BO).

DISCUSSION: *P. Asper* is a member of the section *Asperi*, as is its closest relative, *P. Kurzii* Merr., of Java, a species with the syncarp 7.5–14 cm long, 5–9.5 cm in diameter, broadly ellipsoid; drupes 22–25 mm long, 5–6 mm wide, the upper  $\frac{1}{3}$  free; pileus 3.5–4 mm high; style 4–5.5 mm long; stigma 3–4 mm long; endocarp 7–8 mm long; apical mesocarp 3.5–4 mm long; leaves 3.4–4 m long, 2.6–4.8 cm wide at the middle, and there with 36 parallel secondary veins in each half, and there the margins with prickles 0.5–0.7 mm long, 4–8 mm apart, subulate, ascending, pale. *P. asper* has the syncarp 7.3–8.5 cm long, 6.3–6.5 cm in diameter, broadly obovoid; drupes 23–27 mm long, 4–6 mm wide, the upper  $\frac{1}{4}$  free; style 3–4 mm long; stigma 2.5–3.5 mm long; endocarp 8–9 mm long; apical mesocarp 5–6 mm long; leaves 1.59–1.62 m long; 2.9–3 cm wide at the middle, and there with 32 parallel secondary veins in each half, and there the

margins with prickles 0.6–0.8 mm long, 7–17 mm apart, subulate, compressed, ascending, stramineous.

The new epithet is the Latin adjective *asper*, “rough,” and it is descriptive of the surface of the pileus.